



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-0486; Directorate Identifier 2015-NE-07-AD; Amendment 39-18282; AD 2015-20-04]**

**RIN 2120-AA64**

**Airworthiness Directives; Pratt & Whitney Canada Corp. Turboshift Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Pratt & Whitney Canada Corp. (P&WC) PT6B-37A turboshaft engines. This AD requires initial and repetitive inspections until replacement of the No. 10 bearing, and eventual replacement of the No. 9 bearing, both located in the engine reduction gearbox (RGB) assembly. This AD was prompted by reports of incorrect engine torque for PT6B-37A engines. We are issuing this AD to prevent axial migration of the No. 10 bearing in the engine RGB assembly, which could result in engine overtorque, failure of the engine, in-flight shutdown, and loss of the rotorcraft.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; Web site: <http://www.pwc.ca>. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0486.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0486; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Barbara Caufield, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New

England Executive Park, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to the specified products. The NPRM was published in the *Federal Register* on June 19, 2015 (80 FR 35260). The NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Five incidences of incorrect engine torque indication have been reported for PT6B-37A engine installations on AW119MKII helicopters. A lower than actual engine torque indication due to a faulty indication system, particularly on a helicopter being operated at max allowable torque (90 to 110%) range, may result in undetected over-torque condition.

Repeated over-torque conditions that are undetected and consequently are not corrected in accordance with conditional inspection requirements of original equipment manufacturer (OEM) Instructions for Continued Airworthiness (ICAs), may have a negative impact on the operational safety of the aircraft. Investigation by P&WC has determined the root cause of the subject torque indication anomaly to be the axial migration of part number (P/N) 3310433-03 bearings at the engine torque sensing gear location.

The axial migration of the No. 10 bearing is caused by non-optimal bearing internal clearance. This migration may cause an erroneous torque reading, possibly leading to engine overtorque and engine failure. We are also requiring replacement of the No. 9 bearing since it may also migrate, has the same part number as a No. 10 bearing, and could be installed in the same location as a No. 10 bearing.

## **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (80 FR 35260, June 19, 2015).

## **Conclusion**

We reviewed the available data and determined that air safety and the public interest require adopting this AD as proposed.

## **Related Service Information under 1 CFR Part 51**

P&WC has issued Service Bulletin (SB) No. PT6B-72-39095, Revision No. 3, dated December 29, 2014. The service information describes procedures for inspecting affected bearings. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this final rule.

## **Other Related Service Information.**

P&WC has also issued SB No. PT6B-72-39092, Revision No. 4, dated December 29, 2014. The service information describes procedures for removing affected bearings.

## **Costs of Compliance**

We estimate that this AD affects 83 engines installed on rotocraft of U.S. registry. We estimate that it will take about 3 hours per engine to comply with this AD. We also estimate that it would take about 1 hour per engine to replace the affected bearings. The average labor rate is \$85 per hour. Required parts cost about \$49,800 per engine. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$4,161,620.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2015-20-04 **Pratt & Whitney Canada Corp.:** Amendment 39-18282; Docket No. FAA-2015-0486; Directorate Identifier 2015-NE-07-AD.

**(a) Effective Date**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Pratt & Whitney Canada Corp. (P&WC) PT6B-37A turboshaft engines with engine serial numbers identified in Table 1 of paragraph 4, Appendix, in

P&WC Service Bulletin (SB) No. PT6B-72-39095, Revision No. 3, dated December 29, 2014.

**(d) Reason**

This AD was prompted by reports of incorrect engine torque for PT6B-37A turboshaft engines. We are issuing this AD to prevent axial migration of the No. 10 bearing in the engine reduction gearbox (RGB) assembly, which could lead to engine overtorque, failure of the engine, in-flight shutdown, and loss of the rotorcraft.

**(e) Actions and Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(1) Initial Inspection**

(i) Within 50 flight hours (FHs) time in service after the effective date of this AD, inspect the No. 10 bearing, part number (P/N) 3310433-03, in the RGB assembly for axial movement. Use paragraphs 3.A. to 3.C. in the Accomplishment Instructions in P&WC SB No. PT6B-72-39095, Revision No. 3, dated December 29, 2014, to do the inspection. If the bearing fails the inspection, replace the No. 9 and No. 10 bearings before further flight.

**(2) Repetitive Inspection**

(i) For engines with 500 FHs or less total time since new (TSN), repeat the inspection required by paragraph (e)(1) of this AD every 100 FHs time since last inspection (TSLI) until 500 hours total TSN, and, thereafter, every 200 FHs TSLI until removal.

(ii) For engines with more than 500 FHs total TSN perform the inspection required by paragraph (e)(1) to this AD within 200 FHs TSLI, and, thereafter, every 200 FHs TSLI until removal.

### **(3) Removal and Replacement of Affected Bearings**

(i) For engine serial numbers (S/Ns) PCE-PU0192, PU0193, PU0201, PU0208, PU0209, PU0212, PU0213, PU0214, PU0216, PU0219, and PU0220, remove the No. 9 and No. 10 bearings, P/N 3310433-03, within 450 FHs or 42 months after the effective date of this AD, whichever occurs first, and replace with parts eligible for installation.

(ii) For all engine S/Ns identified in Applicability paragraph (c) of this AD, other than those listed in paragraph (e)(3)(i) of this AD, remove the No. 9 and No. 10 bearings, P/N 3310433-03, and replace with parts eligible for installation within 42 months after the effective date of this AD.

(iii) Replacement of the No. 9 and No. 10 bearing, P/N 3310433-03, with the No. 9 and No. 10 bearing, P/N 3310233-03 or P/N 3310533-03, is terminating action for this AD.

### **(f) Reporting Requirements**

You do not have to contact your Local Field Service Representative as discussed in paragraph 3.C.(3) of P&WC SB No. PT6B-72-39095, Revision No. 3, dated December 29, 2014.

### **(g) Credit for Previous Action**

If you previously replaced the No. 9 and No. 10 bearings in accordance with the instructions contained in P&WC SB No. PT6B-72-39092, Revision No. 2, dated August 8, 2014, or earlier revisions, then you have complied with this AD.



**(h) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

**(i) Related Information**

(1) For more information about this AD, contact Barbara Caufield, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

(2) Refer to MCAI Transport Canada AD CF-2015-01, dated January 20, 2015, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. <http://www.regulations.gov/#!docketDetail;D=FAA-2015-0486>.

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Pratt & Whitney Canada Corp. Service Bulletin (SB) No. PT6B-72-39095, Revision No. 3, dated December 29, 2014.

(ii) Reserved.

(3) For Pratt & Whitney Canada Corp. service information identified in this AD, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; Web site: [www.pwc.ca](http://www.pwc.ca).

(4) You may view this service information at FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on September 22, 2015.

Colleen M. D'Alessandro,  
Assistant Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.

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